

Based on Form PTO-1449 (3/90)			ATTY. DOCKET NO. 674538-2003	SERIAL NO. 09/851,271				
LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)			APPLICANT Choo et al.					
			FILING DATE MAY 8, 2001	GROUP TECH CENTER 1600/2000				
FOREIGN PATENT DOCUMENTS								
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
	AA	WO 00/23464	04/27/00	WIPO	no copy provided			
AB	AB	WO 99/48909	09/30/99	WIPO				
AC	AC	WO 97/27213	07/31/97	WIPO				
AD	AD	WO 00/27878	05/18/00	WIPO				
AE	AE	WO 99/45132	09/10/99	WIPO				
AF	AF	WO 99/42474	08/26/99	WIPO	no copy provided			
AG	AG	WO 99/41371	08/19/99	WIPO				
AH	AH	WO 99/36553	07/22/99	WIPO				
AI	AI	WO 98/54311	12/03/98	WIPO				
AJ	AJ	WO 98/53060	11/26/98	WIPO				
AK	AK	WO 96/11267	04/08/96	WIPO				no
AL	AL	WO 98/53058	11/26/98	WIPO				
AM	AM	WO 97/27212	07/31/97	WIPO				
AN	AN	WO 98/53057	11/26/98	WIPO				
AO	AO	WO 96/06110	02/29/96	WIPO				
AP	AP	WO 96/20951	07/11/96	WIPO				
AQ	AQ	EP 875 567	11/04/98	Europe	no copy provided			
OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)								
EXAMINER J. B. Bresna				DATE CONSIDERED 26 July 2003				
* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.								

Based on Form PTO-1449 (3/90)		ATTY. DOCKET NO. <b>674538-2003</b>	SERIAL NO. <b>09/851,271</b>
LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)		APPLICANT <b>Choo et al.</b>	FEB 20 2002 TECH CENTER 1600/2900 <b>1631</b>
		FILING DATE <b>05/08/01</b>	
U.S. PATENT DOCUMENTS			

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AR	6,013,453	01-11-2000	Choo et al.			
AS	6,007,988	12-28-1999	Choo et al.			
AT	6,001,885	12-14-1999	Vega et al.			
AD	5,972,615	10-26-1999	An et al.			
AU	5,939,538	08-17-1999	Leavitt et al.			
AV	5,916,794	06-29-1999	Chandrasegaran			
AW	5,871,907	02-16-1999	Winter et al.			
AX	5,871,902	02-16-1999	Weininger et al.			
AY	5,869,618	02-9-1999	Lippman et al.			
AZ	5,792,640	08-11-1998	Chandrasegaran			
AAA	5,789,538	08-04-1998	Rebar et al.			
AAB	5,498,530	03-12-1996	Schatz et al.			
AAC	5,487,994	01-30-1996	Chandrasegaran			
AAD	5,436,150	07-25-1995	Chandrasegaran			
AAE	5,403,484	04-04-1995	Ladner et al.			
AAF	5,376,530	12-27-1994	De The et al.			
AAG	5,356,802	10-18-1994	Chandrasegaran			
AAH	5,350,840	09-27-1994	Call et al.			
AAI	5,348,864	09-20-1994	Barbacid			
AAJ	5,340,739	08-23-1994	Stevens et al.			
AAK	5,324,819	06-28-1994	Oppermann et al.			
AAL	5,324,818	06-28-1994	Nabel et al.			
AAM	5,324,638	06-28-1994	Tao et al.			
AAN	5,302,519	04-12-1994	Blackwood et al.			
AAO	5,243,041	09-07-1993	Fernandez-Pol			
AAP	5,223,409	06-29-1993	Ladner et al.			
AAQ	5,198,346	03-30-1993	Ladner et al.			
EXAMINER <i>John Bresser</i>	DATE CONSIDERED <i>26 July 2003</i>					

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<p>Based on Form PTO-1449 (2001)</p> <p>O P E S C 1 4 FEB 14 2003 PATENT &amp; TRADEMARK OFFICE</p> <p>LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)</p>	ATTY. DOCKET NO.	SERIAL NO.
	674538-2003	09/851,231
	APPLICANT	Choo et al.
FILING DATE	GROUP	
MAY 8, 2001	1631	

RECEIVED  
FEB 20 2003  
TECH CENTER 1600/2900

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

BB	AAR	Agarwal et al., "Stimulation of Transcript Elongation Requires both the Zinc Finger and RNA Polymerase II Binding Domains of Human FTIIS," <i>Biochemistry</i> , 30(31):7842-7851 (1991)
BB	AAS	Anato et al., "A thermodynamic study of unusually stable RNA and DNA hairpins," <i>Nuc. Acid Res.</i> , 19(21):5901-5905 (1991)
BB	AAT	Barbas, C.F. "Recent advances in phage display," <i>Cur. Opin. Biotech</i> , 4:526-530 (1993)
BB	AAU	Barbas et al., "Semisynthetic combinatorial antibody libraries: A chemical solution to the diversity problem," <i>PNAS</i> , 89: 4457-4461 (1992)
BB	AAV	Beerli et al., "Toward controlling gene expression at will: Specific regulation of the erb-2/HER-2 promoter by using polydactyl zinc finger proteins constructed from modular building blocks," <i>PNAS</i> , 95:14628-14633 (1998)
BB	BA	Bellefroid et al., "Clusuted organization of homologous KRAB zinc-finger genes with enhanced expression in human T lymphoid cells," <i>EMBO J.</i> , 12(4): 1363-1374 (1993)
BB	BB	Berg, J.M., "DNA Binding Specificity of Steroid Receptors," <i>Cell</i> , 57:1065-1068 (1989)
BB	BC	Berg, J.M., "Spi and the subfamily of zinc finger proteins with guanine-rich binding sites," <i>PNAS</i> , 89:11109-11110 (1992)
BB	BD	Berg et al., "The Galvanization of Biology: A Growing Appreciation of the Roles of Zinc," <i>Science</i> , 271:1081-1085 (1996)
BB	BE	Berg, J.M., "Letting your Fingers Do the Walking" <i>Nat. Biotech</i> , 15:323 (1997)
BB	BF	Bergqvist et al., "Loss of DNA-binding and new transcriptional trans-activation function in polyomavirus large T-antigen with mutation of zinc finger motif," <i>Nuc. Acids Res.</i> , 18(9):2715-2720 (1990)
BB	BG	Blaese et al., "Vectors in cancer therapy: how will they deliver?", <i>Cancer Gene Therapy</i> , 2(4):291-297 (1995)
BB	BH	Caponigro et al., "Transdominant genetic analysis of a growth control pathway," <i>PNAS</i> , 95:7508-7513 (1998)
BB	BI	Celenza et al., "A Yeast Gene That is Essential for Release from Glucose Repression Encodes a Protein Kinase," <i>Science</i> , 233:1175-1180 (1986)
BB	BJ	Cheng et al., "Identification of Potential Target Genes for Adrlp Changes its Binding Specificity at two positions in UASI," <i>Mol. Cell. Biol.</i> , 14(6):3842-3852 (1994)
BB	BK	Cheng et al., "A Single Amino Acid Substitution in Zinc Finger 2 of Adrlp Changes its Binding Specificity at two Positions in UASI," <i>J. Mol. Biol.</i> , 251:1-8 (1995)
BB	BL	Choo et al., "A role in DNA binding for the linker sequences of the first three zinc fingers of TFIIIA," <i>Nuc. Acids Res.</i> , 21(15):3341-3346 (1993).
BB	BM	Barbas et al., "Assembly of combinatorial antibody libraries: A chemical solution to the diversity problem," <i>PNAS</i> , 88:7978-7982 (1991)
BB	BN	Choo et al., "promoter-specific Activation of Gene Expression Directed by bacteriophage-selected Zinc Fingers," <i>J. Mol. Biol.</i> , 273:525-532 (1997)
BB	BO	Choo et al., "All wrapped up," <i>Nature Structural Biology</i> , 5(4):253-255 (1998)
BB	BP	Choo, Y., "Recognition of DNA methylation by zinc fingers," <i>Nat. Struct. Biol.</i> , 5(4):264-265 (1998)
BB	BQ	Choo, Y., "End effects in DNA recognition by zinc finger arrays," <i>Nuc. Acids. Res.</i> 26(2): 554-557 (1998)
BB	BR	Choo et al., "Physical basis of a protein-DNA recognition code," <i>Cur. Opin. Struct. Biol.</i> , 7(1):117-125 (1997)
BB	BS	Hanas et al., "Internal deletion mutants of enopus transcription factor IIIA," <i>Nuc. Acids. Res.</i> , 17(23):9861-9870 (1989)
BB	BT	Hayes et al. "Location of Contacts between Individual Zinc Fingers of <i>Xenopus laevis</i> Transcription Factor IIIA and the Internal Control Region of a 5S RNA Gene," <i>Biochemistry</i> , 31:11600-11605 (1992)
BB	BU	Heinzel et al., "A complex containing N-CoR, mSin3 and histone deacetylase mediates transcriptional repression," <i>Nature</i> , 387:43-48 (1997)

EXAMINER

J.B. Bruse

DATE CONSIDERED

26 July 2003

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Based on Form PTO-1449 (3/90)			ATTY. DOCKET NO. <b>674538-2003</b>	SERIAL NO. <b>09/851,271</b>																																																																					
LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)			APPLICANT <b>Choo et al.</b>	GROUP <b>163)</b>																																																																					
			FILING DATE <b>MAY 8, 2001</b>																																																																						
<p><b>RECEIVED</b>  <b>NECH CENTER 1600</b>  <b>FEB 20 2002</b></p> <p>OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)</p> <table border="1"> <tr><td><b>JB3</b></td><td>BV</td><td>Clarke et al., "Zinc Fingers in <i>Caenorhabditis elegans</i>: Finding Families and probing pathways," <i>Science</i>, 282:2018-2022</td></tr> <tr><td><b>JB3</b></td><td>BW</td><td>Corbi, N et al., "Synthesis of a New Zinc Finger peptide; Comparison of its 'Code' Deduced and 'Casting' derived binding sites", <i>FEBS letters</i>, 417:71-74 (1997)</td></tr> <tr><td><b>JB3</b></td><td>BX</td><td>Crozatier, et al., "Single Amino Acid Exchanges in Separate Domains of the <i>Drosophila</i> serendipity Zinc Finger protein cause embryonic and sex Biased Lethality," <i>Genetics</i>, 131: 905-916 (1992)</td></tr> <tr><td><b>JB3</b></td><td>BY</td><td>Debs et al., "Regulation of Gene Expression in vivo by Liposome-mediated Delivery of a purified Transcriptional Factor", <i>J. Biol. Chem.</i>, 265(18):10189-10192 (1990)</td></tr> <tr><td><b>JB3</b></td><td>BZ</td><td>Desjarlais et al., "Length-encoded multiplex binding site determination: Application to zinc finger proteins," <i>PNAS</i>, 91:11099-11103 (1992)</td></tr> <tr><td><b>JB3</b></td><td>CA</td><td>Desjarlais et al., "Redesigning the DNA-Binding Specificity of a Zinc Finger Protein: A Data Base-Guided Approach," <i>Proteins Structure Function and Genetics</i>, 12(2):101-104 (1992)</td></tr> <tr><td><b>JB3</b></td><td>CB</td><td>Desjarlais et al., "Resdesigning the DNA-Binding Specificity of a Zinc Finger Protein: A data Base-Guided Approach," <i>Proteins: Structure Function and Genetics</i>, 13:272 (1992)</td></tr> <tr><td><b>JB3</b></td><td>CC</td><td>Dibello et al., "The <i>Drosophila</i> Broad Complex Encodes a Family of Related Proteins Containing Zinc Fingers," <i>Genetics</i>, 129:385-397 (1991)</td></tr> <tr><td><b>JB3</b></td><td>CD</td><td>Elrod-Erickson et al., "High-resolution structures of variant Zif268-DNA complexes: implications for understanding zinc finger-DNA recognition," <i>Structure</i>, 6(4):451-464 (1998)</td></tr> <tr><td><b>JB3</b></td><td>CE</td><td>Hamilton et al., "High affinity binding sites for the Wilms' tumor suppressor protein WT1," <i>Nuc. Acids Res.</i>, 23(2):277-284 (1995)</td></tr> <tr><td><b>JB3</b></td><td>CF</td><td>Hamilton et al. "Comparison of the DNA binding Characteristics fo the related Zinc Finger Proteins WT1 and EGR1," <i>Biochemistry</i>, 37:2051-2058 (1998)</td></tr> <tr><td><b>JB3</b></td><td>CG</td><td>Elrod-Erickson et al., "Zif268 protein-DNA complex refined at 1.6A: a model system for understanding zinc finger-DNA interactions," <i>Structure</i> 4(10):1171-1180 (1996)</td></tr> <tr><td><b>JB3</b></td><td>CH</td><td>Fairall et al., "The crystal strucure of a two zinc finger peptide reveals an extension to the rules for zinc-finger/DNA recognition," <i>Nature</i>, 366:483-487 (1993)</td></tr> <tr><td><b>JB3</b></td><td>CI</td><td>Frankel et al., "Fingering Too Many Proteins," <i>Cell</i>, 53:675 (1998)</td></tr> <tr><td><b>JB3</b></td><td>CJ</td><td>Friesen et al., "Phage Display of RNA Binding Zinc Fingers from Trascriptional Factor IIIA" <i>J. Biol. Chem.</i>, 272(17):10994-10997 (1997)</td></tr> <tr><td><b>JB3</b></td><td>CK</td><td>Friesen et al., "Specific RNA binding proteins cosntructed from zinc fingers," <i>Nature Structural Biology</i>, 5(7):543-546 (1998)</td></tr> <tr><td><b>JB3</b></td><td>CL</td><td>Ghosh, <i>Nuc. Acids Res.</i>, 18:1749-1756</td></tr> <tr><td><b>JB3</b></td><td>CM</td><td>Gogos et al., "Recognition of diverse sequences by class I zinc fingers: Asymmedtries and indirect effects on specificity in the itneraction between <u>CF@II</u> and A+T-rich sequence elements," <i>PNAS</i>, 93(5):2159-2164 (1996)</td></tr> <tr><td><b>JB3</b></td><td>CN</td><td>Gossen et al., "Tight control of gene expression in mammalian cells by tetracycline-responsive promoters," <i>PNAS</i>, 89:5547-5551 (1992)</td></tr> <tr><td><b>JB3</b></td><td>CO</td><td>Greisman et al., "A General Strategy for Selecting High-Affinity Zinc Finger Proteins for Diverse DNA Target sites," <i>Science</i>, 275:657-661 (1997)</td></tr> <tr><td><b>JB3</b></td><td>CP</td><td>Hirst et al., "Discrimination of DNA response elements for thyroid hormone and estrogen is dependant on dimerization of receptor DNA binding domains," <i>PNAS</i>, 89:5527-5531 (1992)</td></tr> <tr><td><b>JB3</b></td><td>CQ</td><td>Hoffman et al., "Structures of DNA-binding mutant zinc finger domains: implications for DNA binding," <i>Prot. Science</i>, 2:951-965 (1993)</td></tr> <tr><td><b>JB3</b></td><td>CR</td><td>Isalan et al., "Comprehensive DNA Recognition through Concerte Interactions form Adjacent Zinc Fingers," <i>Biochemistry</i>, 37:12026-12033 (1998)</td></tr> </table>					<b>JB3</b>	BV	Clarke et al., "Zinc Fingers in <i>Caenorhabditis elegans</i> : Finding Families and probing pathways," <i>Science</i> , 282:2018-2022	<b>JB3</b>	BW	Corbi, N et al., "Synthesis of a New Zinc Finger peptide; Comparison of its 'Code' Deduced and 'Casting' derived binding sites", <i>FEBS letters</i> , 417:71-74 (1997)	<b>JB3</b>	BX	Crozatier, et al., "Single Amino Acid Exchanges in Separate Domains of the <i>Drosophila</i> serendipity Zinc Finger protein cause embryonic and sex Biased Lethality," <i>Genetics</i> , 131: 905-916 (1992)	<b>JB3</b>	BY	Debs et al., "Regulation of Gene Expression in vivo by Liposome-mediated Delivery of a purified Transcriptional Factor", <i>J. Biol. Chem.</i> , 265(18):10189-10192 (1990)	<b>JB3</b>	BZ	Desjarlais et al., "Length-encoded multiplex binding site determination: Application to zinc finger proteins," <i>PNAS</i> , 91:11099-11103 (1992)	<b>JB3</b>	CA	Desjarlais et al., "Redesigning the DNA-Binding Specificity of a Zinc Finger Protein: A Data Base-Guided Approach," <i>Proteins Structure Function and Genetics</i> , 12(2):101-104 (1992)	<b>JB3</b>	CB	Desjarlais et al., "Resdesigning the DNA-Binding Specificity of a Zinc Finger Protein: A data Base-Guided Approach," <i>Proteins: Structure Function and Genetics</i> , 13:272 (1992)	<b>JB3</b>	CC	Dibello et al., "The <i>Drosophila</i> Broad Complex Encodes a Family of Related Proteins Containing Zinc Fingers," <i>Genetics</i> , 129:385-397 (1991)	<b>JB3</b>	CD	Elrod-Erickson et al., "High-resolution structures of variant Zif268-DNA complexes: implications for understanding zinc finger-DNA recognition," <i>Structure</i> , 6(4):451-464 (1998)	<b>JB3</b>	CE	Hamilton et al., "High affinity binding sites for the Wilms' tumor suppressor protein WT1," <i>Nuc. Acids Res.</i> , 23(2):277-284 (1995)	<b>JB3</b>	CF	Hamilton et al. "Comparison of the DNA binding Characteristics fo the related Zinc Finger Proteins WT1 and EGR1," <i>Biochemistry</i> , 37:2051-2058 (1998)	<b>JB3</b>	CG	Elrod-Erickson et al., "Zif268 protein-DNA complex refined at 1.6A: a model system for understanding zinc finger-DNA interactions," <i>Structure</i> 4(10):1171-1180 (1996)	<b>JB3</b>	CH	Fairall et al., "The crystal strucure of a two zinc finger peptide reveals an extension to the rules for zinc-finger/DNA recognition," <i>Nature</i> , 366:483-487 (1993)	<b>JB3</b>	CI	Frankel et al., "Fingering Too Many Proteins," <i>Cell</i> , 53:675 (1998)	<b>JB3</b>	CJ	Friesen et al., "Phage Display of RNA Binding Zinc Fingers from Trascriptional Factor IIIA" <i>J. Biol. Chem.</i> , 272(17):10994-10997 (1997)	<b>JB3</b>	CK	Friesen et al., "Specific RNA binding proteins cosntructed from zinc fingers," <i>Nature Structural Biology</i> , 5(7):543-546 (1998)	<b>JB3</b>	CL	Ghosh, <i>Nuc. Acids Res.</i> , 18:1749-1756	<b>JB3</b>	CM	Gogos et al., "Recognition of diverse sequences by class I zinc fingers: Asymmedtries and indirect effects on specificity in the itneraction between <u>CF@II</u> and A+T-rich sequence elements," <i>PNAS</i> , 93(5):2159-2164 (1996)	<b>JB3</b>	CN	Gossen et al., "Tight control of gene expression in mammalian cells by tetracycline-responsive promoters," <i>PNAS</i> , 89:5547-5551 (1992)	<b>JB3</b>	CO	Greisman et al., "A General Strategy for Selecting High-Affinity Zinc Finger Proteins for Diverse DNA Target sites," <i>Science</i> , 275:657-661 (1997)	<b>JB3</b>	CP	Hirst et al., "Discrimination of DNA response elements for thyroid hormone and estrogen is dependant on dimerization of receptor DNA binding domains," <i>PNAS</i> , 89:5527-5531 (1992)	<b>JB3</b>	CQ	Hoffman et al., "Structures of DNA-binding mutant zinc finger domains: implications for DNA binding," <i>Prot. Science</i> , 2:951-965 (1993)	<b>JB3</b>	CR	Isalan et al., "Comprehensive DNA Recognition through Concerte Interactions form Adjacent Zinc Fingers," <i>Biochemistry</i> , 37:12026-12033 (1998)
<b>JB3</b>	BV	Clarke et al., "Zinc Fingers in <i>Caenorhabditis elegans</i> : Finding Families and probing pathways," <i>Science</i> , 282:2018-2022																																																																							
<b>JB3</b>	BW	Corbi, N et al., "Synthesis of a New Zinc Finger peptide; Comparison of its 'Code' Deduced and 'Casting' derived binding sites", <i>FEBS letters</i> , 417:71-74 (1997)																																																																							
<b>JB3</b>	BX	Crozatier, et al., "Single Amino Acid Exchanges in Separate Domains of the <i>Drosophila</i> serendipity Zinc Finger protein cause embryonic and sex Biased Lethality," <i>Genetics</i> , 131: 905-916 (1992)																																																																							
<b>JB3</b>	BY	Debs et al., "Regulation of Gene Expression in vivo by Liposome-mediated Delivery of a purified Transcriptional Factor", <i>J. Biol. Chem.</i> , 265(18):10189-10192 (1990)																																																																							
<b>JB3</b>	BZ	Desjarlais et al., "Length-encoded multiplex binding site determination: Application to zinc finger proteins," <i>PNAS</i> , 91:11099-11103 (1992)																																																																							
<b>JB3</b>	CA	Desjarlais et al., "Redesigning the DNA-Binding Specificity of a Zinc Finger Protein: A Data Base-Guided Approach," <i>Proteins Structure Function and Genetics</i> , 12(2):101-104 (1992)																																																																							
<b>JB3</b>	CB	Desjarlais et al., "Resdesigning the DNA-Binding Specificity of a Zinc Finger Protein: A data Base-Guided Approach," <i>Proteins: Structure Function and Genetics</i> , 13:272 (1992)																																																																							
<b>JB3</b>	CC	Dibello et al., "The <i>Drosophila</i> Broad Complex Encodes a Family of Related Proteins Containing Zinc Fingers," <i>Genetics</i> , 129:385-397 (1991)																																																																							
<b>JB3</b>	CD	Elrod-Erickson et al., "High-resolution structures of variant Zif268-DNA complexes: implications for understanding zinc finger-DNA recognition," <i>Structure</i> , 6(4):451-464 (1998)																																																																							
<b>JB3</b>	CE	Hamilton et al., "High affinity binding sites for the Wilms' tumor suppressor protein WT1," <i>Nuc. Acids Res.</i> , 23(2):277-284 (1995)																																																																							
<b>JB3</b>	CF	Hamilton et al. "Comparison of the DNA binding Characteristics fo the related Zinc Finger Proteins WT1 and EGR1," <i>Biochemistry</i> , 37:2051-2058 (1998)																																																																							
<b>JB3</b>	CG	Elrod-Erickson et al., "Zif268 protein-DNA complex refined at 1.6A: a model system for understanding zinc finger-DNA interactions," <i>Structure</i> 4(10):1171-1180 (1996)																																																																							
<b>JB3</b>	CH	Fairall et al., "The crystal strucure of a two zinc finger peptide reveals an extension to the rules for zinc-finger/DNA recognition," <i>Nature</i> , 366:483-487 (1993)																																																																							
<b>JB3</b>	CI	Frankel et al., "Fingering Too Many Proteins," <i>Cell</i> , 53:675 (1998)																																																																							
<b>JB3</b>	CJ	Friesen et al., "Phage Display of RNA Binding Zinc Fingers from Trascriptional Factor IIIA" <i>J. Biol. Chem.</i> , 272(17):10994-10997 (1997)																																																																							
<b>JB3</b>	CK	Friesen et al., "Specific RNA binding proteins cosntructed from zinc fingers," <i>Nature Structural Biology</i> , 5(7):543-546 (1998)																																																																							
<b>JB3</b>	CL	Ghosh, <i>Nuc. Acids Res.</i> , 18:1749-1756																																																																							
<b>JB3</b>	CM	Gogos et al., "Recognition of diverse sequences by class I zinc fingers: Asymmedtries and indirect effects on specificity in the itneraction between <u>CF@II</u> and A+T-rich sequence elements," <i>PNAS</i> , 93(5):2159-2164 (1996)																																																																							
<b>JB3</b>	CN	Gossen et al., "Tight control of gene expression in mammalian cells by tetracycline-responsive promoters," <i>PNAS</i> , 89:5547-5551 (1992)																																																																							
<b>JB3</b>	CO	Greisman et al., "A General Strategy for Selecting High-Affinity Zinc Finger Proteins for Diverse DNA Target sites," <i>Science</i> , 275:657-661 (1997)																																																																							
<b>JB3</b>	CP	Hirst et al., "Discrimination of DNA response elements for thyroid hormone and estrogen is dependant on dimerization of receptor DNA binding domains," <i>PNAS</i> , 89:5527-5531 (1992)																																																																							
<b>JB3</b>	CQ	Hoffman et al., "Structures of DNA-binding mutant zinc finger domains: implications for DNA binding," <i>Prot. Science</i> , 2:951-965 (1993)																																																																							
<b>JB3</b>	CR	Isalan et al., "Comprehensive DNA Recognition through Concerte Interactions form Adjacent Zinc Fingers," <i>Biochemistry</i> , 37:12026-12033 (1998)																																																																							
EXAMINER <i>JB. Brusick</i>	DATE CONSIDERED <i>26 July 2003</i>																																																																								
<p>* EXAMINER Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>																																																																									

Based on Form PTO-1449 (3/90)			ATTY. DOCKET NO. <b>674538-2003</b>	SERIAL NO. <b>09/851,271</b>
COST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)			APPLICANT <b>Choo et al.</b>	
			FILING DATE <b>MAY 8, 2001</b>	GROUP <b>163</b>
OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)				
163	CS		Isalan et al. "Synergy between adjacent zinc fingers in sequence-specific DNA recognition," PNAS, 94(11): 5617-5621 (1997)	
163	CT		Jamieson et al., "A zinc finger directory for high affinity DNA recognition," PNAS, 93:12834-12839 (1996)	
163	CU		Julian et al., "Replacement of His23 by Cys in a zinc finger of HIV-1 NCp7 led to a change in 1H NMR-derived 3D structure and to a loss of biological activity," FEBS Ltrs., 331(1,2):43-48 (1993)	
163	CV		Kamiuchi et al., "New multizinc finger protein: biosynthetic design and characteristics of DNA recognition," Nuc. Acids. Symp., 37:153-154 (1997)	
163	CW		Kang, J.S. et al., "Zinc finger Proteins as Designer Transcription Factors," J. Biol. Chem., 275(12):8742-8748 (2000)	
163	CX		Kim et al., "Serine at Position 2 in the DNA Recognition helix of a Cys2-His2 Zinc finger Peptide is Not, in General, Responsible for Base Recognition," J. Mol. Biol., 252:1-5 (1995)	
163	CY		Kim et al., "Site-Specific cleavage of DNA-RNA hybrids by zinc finger/FokI cleavage domain fusions," Gene, 203:43-49 (1997)	
163	CZ		Kim et al., "A 2.2A resolution crystal structure of a designed zinc finger protein bound to DNA," Nat. Str. Biol., 3(11):940-945 (1996)	
163	DA		Kim et al., "Getting a handhold on DNA: Design of poly-zinc finger proteins with femtomolar dissociation constants," PNAS, 95:2812-2817 (1998)	
163	DB		Kim et al., "Design of TATA box-binding protein/zinc finger fusions for targeted regulation of gene expression," PNAS, 94:3616-3620 (1997)	
163	DC		Kim et al., "Hybrid restriction enzymes: Zinc finger fusions to FokI cleavage domain," PNAS, 93:1156-1160 (1996)	
163	DD		Kim et al., "Transcriptional repression by zinc finger peptides," J. Biol. Chem., 272(47):29795-28000 (1997)	
163	DE		Kinzler et al., "The GLI gene is a member of the Kruppel family of zinc finger proteins," Nature, 332:371-374 (1998)	
163	DF		Klug, A. "Gene regulatory Proteins and their interaction with DNA," Ann. NY Acad. Sci., 758:143-160 (1995)	
163	DG		Klug, A. "Zinc finger peptides for the Regulation of Gene Expression," J. Mol. Biol., 293:215-218 (1999)	
163	DH		Kothekar, V., "Computer simulation of zinc finger motifs from cellular nucleic acid binding protein and their interaction with consensus DNA sequences," FEBS Ltrs., 274(1-2):217-222 (1990)	
163	DI		Kriwacki, et al., "Sequence-specific recognition of DNA by zinc-finger peptides derived from the transcriptional factor SPI," PNAS, 89:9759-9763 (1992)	
163	DJ		Kulda et al., "The regulatory gene area mediating nitrogen metabolism repression in Aspergillus nidulans. Mutations affecting specificity of gene activation alter a loop residue of a putative zinc finger," EMBO J., 9(5):1355-1364 (1990)	
163	DK		Laird-Offringa et al., "RNA-binding proteins tamed," Nat. Str. Biol., 5(8):665-668 (1998)	
163	DL		Mandel-Gut freund et al., "Quantitative parameters for amino acid-base interaction: implications for prediction of protein-DNA binding sites," Nuc. Acid Res., 26(10):2306-2312 (1998)	
163	DM		Mizushima et al., "pEF-BOS, a powerful mammalian expression vector," Nuc. Acids Res., 18(17):5322 (1990)	
163	DN		Nakagama et al., "Sequence and Structural Requirements for High-Affinity DNA binding by the WT1 Gene Product," Mol. Cell. Biol., 15(3):1489-1498 (1995)	
163	DO		Margolin et al., "Kruppel-associated boxes are potent transcriptional repression domains," PNAS, 91:4509-4513 (1994)	
163	DP		Liu et al., "Design of polydactyl zinc-finger proteins for unique addressing within complex genomes," PNAS, 94(11):5525-5530 (1997)	
EXAMINER <i>J.W. Brusas</i>			DATE CONSIDERED <i>26 July 2003</i>	

\* EFPXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

RECEIVED  
FEB 21 2002  
TECH CENTER 1600/2000  
09/718 5381

Based on Form PTO-1449 (3/90)			ATTY. DOCKET NO. 674538-2002	SERIAL NO. 109/718 5381
LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)			APPLICANT Choo et al.	
			FILING DATE 11/22/00	GROUP 1631

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

BB	DQ	Nardelli et al., "Base Sequence discrimination by zinc-finger DNA Binding Domains," Nature, 349:175-178(1991)
BB	DR	Nardelli et al., "Zinc finger-DNA recognition: analysis of base specificity by site-directed mutagenesis," Nuc. Acids. Res. 20(16):4137-4144(1992)
BB	DS	Nekludova et al., "Distinctive DNA conformation with enlarged major groove is found in Zn-finger-DNA and other protein-DNA complexes," PNAS, 91:6948-6952(1994)
BB	DT	Orkin et al., "Report and Recommendations of the Panel to Assess the NIH Investment in research on Gene Therapy," NIH Report December 7, 1995
BB	DU	Pabo et al., "Systematic Analysis of Possible Hydrogen Bonds between Amino Acid side Chains and B-form DNA," J. Biomol. Struct. Dynamics, 1:1039-1049(1983)
BB	DV	Pabo et al., "Protein-DNA Recognition," Ann. Rev. Biochem., 53:293-321(1984)
BB	DW	Pabo, C.O., "Transcriptional Factors: Structural Families and Principles of DNA Recognition," Ann. Rev. Biochem., 61:1053-1095(1992)
BB	DX	Pavletich et al., "Crystal Structure of a Five-Finger GLI-DNA Complex: New Perspectives on Zinc Fingers," Science, 261:1701-1707(1993)
BB	DY	Pavletich et al., "Zinc Finger-DNA Recognition: Crystal Structure of a Zif268-DNA Complex at 2.1 Å," Science, 252:809-817 (1991)
BB	DZ	Pengue et al., "Repression of transcriptional activity at a distance by the evolutionarily conserved KRAB domain present in a subfamily of zinc finger proteins," Nuc. Acids Res., 22(15):2908-2914(1994)
BB	EA	Pengue et al., "Transcriptional Silencing of Human Immunodeficiency Virus Type 1 Long Terminal Repeat-Driven Gene Expression by the Kruppel-Associated Box Repressor Domain Targeted to the Transactivating Repressor Element," J. Virology, 69(10):6577-6580(1995)
BB	EB	Pengue et al., "Kruppel-associated box-mediated repression of RNA polymerase II promoters is influenced by the arrangement of basal promoter elements," PNAS, 93:1015-1020(1996)
BB	EC	Pommerantz et al., "Structure-Based Design of a Dimeric Zinc Finger Protein," Biochemistry, 37(4):965-970(1998)
BB	ED	Pommerantz et al., "Structure-based Design of Transcription Factors," Science, 267:93-96(1995)
BB	EE	Pommerantz et al., "Analysis of homeodomain function by structure-based design of a transcription factor," PNAS, 92:9752-9756
BB	EF	Quian et al., "Two-Dimensional NMR Studies of the Zinc finger motif: Solution Structures and Dynamics of Mutant ZFY Domains Containing Aromatic Substitutions in the Hydrophobic Core," Biochemistry, 31:7463-7476 (1992)
BB	EG	Quigley et al., "Complete Androgen Insensitivity Due to Deletion of Exon C of the Androgen Receptor Gene Highlights the Functional Importance of the Second Zinc Finger of the Androgen Receptor in vivo," Mol. Endocrin., 6(7):1103-1112
BB	EH	Rauscher et al., "Binding of the Wilms' Tumor Locus Zinc Finger protein to the EGR-1 Consensus Sequence," Science, 250:1259-1262(1990)
BB	EI	Ray et al., "Repressor to activator switch by mutations in the first Zn finger of the glucocorticoid receptor: Is direct DNA binding necessary?", PNAS, 88:7086-7090(1991)
BB	EJ	Rebar et al., "Phage Display Methods for Selecting Zinc Finger Proteins with Novel DNA-Binding Specificities," Methods in Enzymology, 267:129-149(1996)
BB	EK	Reith et al., "Cloning of the major histocompatibility complex class II promoter binding protein affected in a hereditary defect in class II gene regulation," PNAS, 86:4200-4204(1989)
BB	EL	Rhodes et al., "Zinc fingers: they play a key part in regulating the activity of genes in many species, from yeast to humans. Fewer than 10 years ago no one knew they existed," Scientific American, 268:56-65(1993)

EXAMINER <i>R. Bruce</i>	DATE CONSIDERED <i>26 July 2003</i>
-----------------------------	--

\* EFPXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

TECH CENTER 1600/2900

FEB 0 2002  
09/851,271

RECEIVED

Based on Form PTO-1449 (3/90)			ATTY. DOCKET NO. 674538-2003	SERIAL N.
LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)			APPLICANT Choo et al.	
			FILING DATE MAY 8, 2001	GROUP 1631
OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)				
183	EM	Rice et al., "Inhibitors of HIV Nucleocapsid Protein Zinc Fingers as Candidates for the Treatment fo AIDS," Science, 270:1194-1197(1995)		
183	EN	Rivera, Nat. Medicine, 270:1194 Vol. 2 Pages 1028-1032 (1996)		
183	EO	Rollins et al., "Role of TFIIIA Zinc Fingers in vivo: analysis of single finger function in developing Xenopus Embryos," Mol. Cell. Biol., 13(8):4776-4783(1993)		
183	EP	Saleh et al., "A Novel Zinc Finger Gene on Human Chromosome 1qter That is Alternatively Spliced in Human Tissues and Cell Lines," Am. J. Hum. Genet., 52:192-203		
183	EQ	Shi et al., "Specific DNA-RNA Hybrid Binding by Zinc Finger Proteins," Science, 268:282-284(1995)		
183	ER	Shi et al., "DNA unwinding induced by zinc finger protein binding," Biochemistry, 35:3845-3848(1996)		
183	ES	Shi et al., "A direct comparison of the properties of natural and designed finger proteins," Chem & Biol., 2(2):83-89(1995)		
183	ET	Singh et al., "Molecular cloning of an Enhancer Binding Protein: Isolation by Screening of an Expression Library with a Recognition Site DNA," Cell, 52:415-423(1988)		
183	EU	Skerka et al., "Coordinate Expression and Distinct DNA-Binding Characteristics of the four EGR-Zinc Finger Proteins in Jukat T Lymphocytes," Immunobiology, 198:179-191(1997)		
183	EV	South et al., "The Nucleocapsid Protein Isolated from HIV-1 Particles Binds Zinc and Forms Retroviral-Type Zinc Fingers," Biochemistry, 29:7786-7789(1990)		
183	EW	Suzuki et al., "Stereochemical basis of DNA recognition by Zn fingers," Nuc. Acids Res., 22(16):3397-3405(1994)		
183	EX	Suzuki et al., "DNA recognition code of transcription factors in the helic-turn-helix, probe helix, hormone receptor, and zinc finger families," PNAS, 91:12357-12361(1994)		
183	EY	Swirnoff et al., "DNA-Binding Specificity of NGFI-A and Related Zinc Finger Transcription Factors," Mol. Cell Biol., 15(4):2275-2287(1995)		
183	EZ	Taylor et al., "Designing Zinc-Finger ADR1 Mutants with Altered Specificity of DNA Binding to T in UASI Sequences," Biochemistry, 34:3222-3230(1995)		
183	FA	Theisen et al., "Determination of DNA binding specificites of mutated zinc finger domains," FEBS Ltrs., 283(1):23-26(1991)		
183	FB	Theisen et al., "Amino Acid Substitutions in the SP1 Zinc Finger Domain alter the DNA binding affinity to Cognate SP1 Target Site," Biochm. Biophys. Comm., 175(1):333-338(1991)		
183	FC	Thukral et al., "Localization of a Minimal Binding Domain and Activation Regions in Yeast Regulatory Protein ADR1," Mol. Cell Biol., 9(6):2360-2369(1989)		
EXAMINER J. B. Bussard			DATE CONSIDERED 26 July 2003	
* EXAMINER Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.				

RECEIVED  
FEB 20 2002  
Sheet 8 of 8

TECH CENTER 1600/2900

Based on Form PTO-1449 (3/90)			ATTY. DOCKET NO. 674538-2003	SERIAL NO. 09/851,444
LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)			APPLICANT Choo et al.	
			FILING DATE MAY 8, 2001	GROUP 1631
OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)				
JB3	FD		Thukral et al., "Two Monomers of Yeast Transcription Factor ADR1 Bind a Palindromic Sequence Symmetrically to Activate ADH2 Expression," Mol. Cell Biol., 11(3):1566-1577(1991)	
JB3	FE		Thukral et al., "Alanine scanning site-directed mutagenesis of the zinc fingers of transcription factor ADR1: Residues that contact DNA and that transactivate," PNAS, 88:9188-9192(1991) + correction page	
JB3	FF		Thukral et al., "Mutations in the Zinc fingers of ADR1 that change the specificity of DNA binding and transactivation," Mol. Cell. Biol., 12(6):2784-2792(1992)	
JB3	FG		Vortkamp et al., "Identification of optimized Target Sequences for the GLI3 Zinc Finger Protein," DNA Cell Biol., 14(7):629-634(1995)	
JB3	FH		Wang, S.W. et al. "Dimerization of Zinc Fingers Mediated by Peptides Evolved in vitro from Random Sequences," PNAS, 96:9568-9573(1999)	
JB3	FI		Webster et al., "Conversion of the E1A Cys4 zinc finger to a nonfunctional His2, Cys2 zinc finger by a single point mutation," PNAS, 88:9989-9993(1991)	
JB3	FJ		Whyatt et al., "The two zinc finger-like domains of GATA-1 have different DNA binding specificities," EMBO J., 12(13):4993-5005(1993)	
JB3	FK		Wilson et al., "In vivo Mutational analysis of the NGFI-A Zinc Fingers," J. Biol. Chem., 267(6):3718-3724(1992)	
JB3	FL		Witzgall et al., "The Kruppel-associated box-A (KRAB-A) domain of zinc finger proteins mediates transcriptional repression," PNAS, 91:4514-4518(1994)	
JB3	FM		Wolfe, S.A. et al., "Analysis of Zinc Fingers Optimized via Phage Display: Evaluating the Utility of a Recognition Code," J. Mol. Biol., 285:1917-1934(1999)	
JB3	FN		Wright et al., "Expression of a Zinc Finger Gene in HTLV-II-transformed Cells," Science, 248:588-591(1990)	
JB3	FO		Yu et al., "A hairpin ribozyme inhibits expression of diverse strains of human immunodeficiency virus type 1," PNAS, 90:6340-6344(1993)	
JB3	FP		Yang et al., "Surface plasmon resonance based kinetic studies of zinc finger-DNA interactions," J. Immunol. Meth., 183:175-182(1995)	
EXAMINER J.K. Brusca			DATE CONSIDERED 26 July 2003	
* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.				

attachment Paper 8

Sheet 1 of 1

Based on Form PTO-1449 (3/90)  LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)				ATTY. DOCKET NO.	RECEIVED		
				674538-2003	SEARCHED	109/851,271	INDEXED
				APPLICANT	DEC 19 2001		
				FILING DATE	Choo et al.		
				May 8, 2001	TECH CENTER 1600/2900		
					GROUP 1683 1631		
U.S. PATENT DOCUMENTS							
EXAMINER INITIALS		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA	US 5,830,721	11/03/98	Stemmer et al.			
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
	AB	WO 92/02536A1	08/01/91	WIPO			YES NO
OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
	AC		Desjarlais & Berg (1992) Proteins: Structure, Function and Genetics, vol. 13: pg 272				
	AD		Thiesen & Bach (1991) FEBS, vol. 283, no. 1: pgs 23-26				
	AE		Rebar & Pabo (1994) Science, vol. 263: pgs 671-673				
	AF		Jamieson et al., (1994) Biochemistry, vol. 33: pgs 5689-5695				
	AG		Suzuki et al., (1994) NAR, vol. 22, No. 16: pgs 3397-3405				
	AH		Mattheakis et al (1994) Proc Natl Acad Sci USA, vol. 91: pgs 9022-9026				
	AJ		Lovett & Rogers (1996) Microbiological Reviews, vol. 60: pgs 366-385				
	AJ		Gu et al (1994) Proc Natl Acad Sci USA, vol. 91: pgs 5612-5616				
	AK		Holschuh & Gassen (1982) J. Biol. Chem., vol. 257, No. 4: pgs 1987-1992				
	AL		Pavletich & Pabo, (1993) Science, vol. 261: pgs 1701-1707				
	AM		Mathias et al., (1989) NAR, vol. 17: pg 6418				
	AN		Studier et al. (1990) Methods in Enzymol., vol. 185: pgs 60-89				
	AO		Dickerson & Drew (1981) J. Mol. Biol., vol. 149: pgs 761-786				
	AP		Houbavil et al., (1996) PNAS (USA), vol. 93: pgs 13577-13582				
	AQ		Fairall et al., (1993) Nature, vol. 366: pgs 483-487				
	AR		Eliel-Erickson et al., (1996) Structure, vol. 4: pgs 1171-1180 copy not provided				
	AS		Krizek et al. (1991) J. Am. Chem. Soc., vol. 113: pgs 4518-4523				
	AT		Lee et al., (1989) Science, vol. 245: pgs 635-637				
	AU		Berg (1988) PNAS (USA), vol. 85, No. 1: pgs 99-103 copy not provided				
	AV		Miller et al., (1985) EMBO J., vol. 4: pgs 1609-1614 copy not provided				
	AW		Pabo & Sauer (1992) Annual Review of Biochem., vol. 61: pgs 1035-1095				
	AX		Nardelli et al. (1991) Nature (London), vol 349: pgs 175-178				
	AY		Matthews (1988) Nature (London), vol. 335: pgs 294-295				
	AZ		Klug (1993) Gene, vol. 135: pgs 83-92				
	BA		Harrison (1991) Nature (London), vol. 353: pgs 715-719				

J. B. Bruce 26 July 2003

Based on Form PTO-1449 (3/90)  LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)	ATTY. DOCKET NO.	SERIAL NO.
	674538-2003	To be assigned
	APPLICANT	
	CHOO ET AL.	
FILING DATE  Herewith	GROUP	
	1631	

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA						

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
AB	AB	WO 96/06166	2/29/96	WIPO				
AC	AC	WO 96/32475	10/17/96	WIPO				
AD	AD	WO 95/19431	07/20/95	WIPO				
AE	AE	WO 95/11922	05/04/95	WIPO				
AF	AF	WO 98/53059	11/26/98	WIPO				
AG	AG	WO 99/47656	9/23/99	WIPO				

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AB	AH	Desjarlais et al., "Toward rules relating zinc finger protein sequences and DNA binding site preferences", Proc. Natl. Acad. Sci. USA, vol. 89, pp. 7345-7349, August 1992 (referred to as XP 002009496)
AB	AI	Nardelli et al., "Zinc finger-DNA recognition: analysis of base specificity by site-directed mutagenesis", Nucleic Acid Research, GB, Oxford University Press, vol. 20, no. 16, August 25, 1992 (referred to as XP 002009497)
	AJ	
	AK	

EXAMINER	DATE CONSIDERED
JK. Bruen	26 July 2003

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.